



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. LT-163	SERIAL NO. 10/728,021
	APPLICANT David C. Salerno et al.	
	FILING DATE December 3, 2003	GROUP 2838

U.S. PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AB	4,160,288	07/03/79	Stuart et al.			
	4,326,245	04/20/82	Saleh			
	4,428,015	01/24/84	Nesler			
	4,541,041	09/10/85	Park et al.			
	4,610,521	09/09/86	Inoue			
	4,672,303	06/09/87	Newton			SERIAL NO. 11/722, 821
	4,683,529	07/28/87	Bucher, II			
	4,754,385	06/28/88	McDade et al.			
	4,843,532	06/27/89	Freedman			
	4,884,183	11/28/89	Sable			
	5,134,355	07/28/92	Hastings			
	5,170,333	12/08/92	Niwayama			FILING DATE IF APPROPRIATE
	5,237,606	08/17/93	Ziermann			
	5,408,162	04/18/95	Williams			
	5,481,178	01/02/96	Wilcox et al.			
	5,568,044	10/22/96	Bittner			
5,627,460	05/06/97	Bazinet et al.				
	6,307,356	10/23/01	Dwelley			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AB	3-113986	11/21/91	Japan			X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
AB	Cassani, John C. et al.; "Sophisticated Control IC Enhances 1MHz Current Controlled Regulator Performance"; Proceedings of HFPC, May 1992, pp. 167-173.

EXAMINER

A. Berlanc

DATE CONSIDERED

11/05

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STATEMENT BY APPLICANT

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
<i>AB</i>	Goodenough, Frank; "Synchronous Rectifier UPS PC Battery Life"; Electronic Design, pp. 47-52, 04/16/92.
	Gracie, Paul D.; "Intermittent Converter Saves Power"; EDN, p. 151, 09/01/89.
	Meakin, Mike; "The LM3578 Switching Power Regulator"; Electronic Engineering, 07/86.
	National Semiconductor Corporation; "LM1578/LM2578/LM3578 Switching Regulator"; Preliminary Datasheet, 1987.
	Texas Instruments; "TPS5120 DUAL OUTPUT, TWO-PHASE SYNCHRONOUS BUCK DC/DC CONTROLLER"; Datasheet, August 2000 (revised March 2003).
	Texas Instruments; TPS5130 "TRIPLE SYNCHRONOUS BUCK CONTROLLER WITH NMOS LDO CONTROLLER"; Datasheet, May 2002.
	Texas Instruments; "TPS5140 FOUR-CHANNEL DC/DC CONTROLLER FOR NOTEBOOK PC POWER"; Datasheet, December 2000 (revised January 2001).
	Texas Instruments; TPS43000 "MULTI-TOPOLOGY HIGH-FREQUENCY PWM CONTROLLER"; Datasheet, October 2001.
	Texas Instruments; "TPS61000, TPS61001, TPS61002, TPS61003, TPS61004, TPS61005, TPS61006, TPS61007 SINGLE- AND DUAL-CELL BOOST CONVERTER WITH START-UP INTO FULL LOAD"; Datasheet, March 2000 (revised April 2003).
	Texas Instruments; TPS61030, TPS61031, TPS61032 "SINGLE-CELL LI OR DUAL CELL BOOST CONVERTER"; Datasheet, September 2002 (revised February 2003).
	Texas Instruments; TPS61100, TPS61103, TPS61106, TPS61107 "DUAL-OUTPUT, SINGLE-CELL BOOST CONVERTER"; Datasheet, June 2002 (revised September 2002).
	Texas Instruments; TPS61120, TPS61121, TPS61122 "DUAL-OUTPUT, SINGLE-CELL LI OR DUAL CELL BOOST CONVERTER"; Datasheet, June 2002.
	Texas Instruments; TPS61130, TPS61131, TPS61132 "DUAL-OUTPUT, SINGLE-CELL LI OR DUAL CELL SEPIC CONVERTER"; Datasheet, June 2002.
	Texas Instruments; "TPS62000, TPS62001, TPS62002, TPS62003, TPS62004, TPS62005, TPS62006, TPS62007, TPS62008 HIGH-EFFICIENCY STEP-DOWN LOW POWER DC-DC CONVERTER"; Datasheet, September 2000 (revised June 2002).
	Texas Instruments; TPS62050, TPS62051, TPS62052, TPS62054, TPS62056 "800-mA SYNCHRONOUS STEP-DOWN CONVERTER"; Datasheet, September 2002 (revised May 2003).
	Texas Instruments; "Maximum Output Current of the TPS62050"; Application Report, April 2003.
	Texas Instruments; "TPS6205xEVM Low-Power, DC-DC EVM for High-Efficiency, Step-Down Converters"; User's Guide, February 2003.

EXAMINER

A. Berhane

DATE CONSIDERED

1/08

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
AB	Texas Instruments; TPS62200, TPS62201, TPS62202, TPS62203, TPS62204, TPS62205 "HIGH-EFFICIENCY, SOT23 STEP-DOWN, DC-DC CONVERTER"; Datasheet, March 2002 (revised October 2002).
	Texas Instruments; UC28023, UC28025 "ECONOMY HIGH-SPEED PWM CONTROLLER"; Datasheet, March 2003.
	Uchida, Takahito; "Control Circuit for Switching Regulator," Japanese Inventor Associated Disclosed Technology Publication No. 92-2362, published 2/15/92 (in Japanese, with translation).
	Unitrode; "The UC3874 is...Good to the last WATT"; Preliminary Datasheet, February 1996.
	Unitrode; "Using Bipolar Synchronous Rectifiers Improves Power Supply Efficiency"; Application Note U-103, 1989-1990 Unitrode Semiconductor Databook and Application Notes, pp. 12-88 to 12-94, 6/85.
	Unitrode; UCC1582, UCC2582, UCC3582 "High Efficiency Synchronous, Step Down Controller"; Advanced Information Datasheet, February 1995.
	Unitrode; UCC1582, UCC2582, UCC3582 "High Efficiency Synchronous, Step Down Controller"; Preliminary Datasheet, January 1997.
	Unitrode; UC1870 -1/-2, UC2870 -1/-2, UC3870 -1/-2 "High Efficiency, Synchronous, Step-down (Buck) Controllers"; Datasheet, August 1998.
	Unitrode; UC1846/7, UC2846/7, UC3846/7 "Current Mode PWM Controller"; Datasheet, January 1997.
	Unitrode; UC1874-1,-2, UC2874-1,-2, UC3874-1,-2 "High Efficiency, Synchronous, Step-down (Buck) Controllers"; Preliminary Datasheet, January 1995.
	Unitrode; UC1895, UC2895, UC3895 "Synchronous Rectifier Buck PWM Controller"; Advanced Information Datasheet, October 6, 1992.
	Unitrode; UCC29421/2, UCC39421/2 Multimode High Frequency PWM Controller"; Preliminary Datasheet, October 1999.
	Unitrode Products from Texas Instruments; "UCC29421, UCC29422, UCC39421, UCC39422 MULTIMODE HIGH-FREQUENCY PWM CONTROLLER"; Datasheet, October 1999 (revised April 2000).
	Unitrode Products from Texas Instruments; "TPS62100, TPS62101, TPS62102, TPS62103 MULTIMODE LOW-POWER BUCK CONVERTER"; Datasheet, May 2000 (revised December 2000).

EXAMINER

A - Berlance

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A3	3,458,798	07/29/69	Fang et al.			
	3,571,697	03/23/71	Phillips			
	3,579,091	05/18/71	Clarke et al.			
	3,581,186	05/25/71	Weinberger			
	3,582,758	06/01/71	Gunn			
	3,585,491	06/1971	Peterson			
	3,733,540	05/15/73	Hawkins			
	3,772,588	11/1973	Kelly et al.			
	3,784,893	01/08/74	Rando			
	3,863,128	01/28/75	Wilwerding			
	3,879,647	04/22/75	Hamilton et al.			
	3,992,638	11/16/76	Sauvanet			
	4,013,939	03/1977	Biess et al.			
	4,035,710	07/12/77	Joyce			
	4,071,884	01/31/78	Maigret			
	4,160,288	07/03/79	Stuart et al.			
	4,326,245	04/20/82	Saleh			
	4,395,675	07/26/83	Toumani			
	4,428,015	01/24/84	Nesler			
	4,462,069	07/24/84	Becky			
V	4,479,174	10/23/84	Cates			
	4,493,017	01/08/85	Kammiller et al.			
	4,519,024	05/21/85	Federico et al.			
	4,541,041	09/1985	Park et al.			
	4,554,499	11/19/85	Sherman et al.			
	4,578,630	03/1986	Grosch			
	4,610,521	09/09/86	Inoue			
	4,634,956	01/06/87	Davis et al.			

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AB	4,672,303	06/09/87	Newton			
	4,672,518	06/09/87	Murdock			
	4,674,020	06/16/87	Hill			
	4,683,529	07/28/87	Bucher, II			
	4,709,315	11/24/87	Ramos			
	4,712,169	12/08/87	Albach			
	4,716,514	12/29/87	Patel			
	4,727,308	02/23/88	Huljak et al.			
	4,754,385	06/28/88	McDade et al.			
	4,801,859	01/31/89	Dishner			
	4,813,066	03/14/89	Holtz et al			
	4,814,684	03/21/89	McCurdy			
	4,819,122	04/04/89	Gontowski, Jr.			
	4,823,070	04/18/89	Nelson			
	4,843,532	06/27/89	Freedman			
	4,866,587	09/12/89	Wadlington			
	4,870,555	09/26/89	White			
	4,884,183	11/1989	Sable			
	4,902,957	02/20/90	Cassani et al.			
	4,922,404	05/01/90	Ludwig et al.			
	4,928,200	05/22/90	Redl et al.			
	4,929,882	05/29/90	Szepesi			
	4,931,716	06/05/90	Jovanovic et al.			
	4,996,638	02/26/91	Orr			
	5,028,861	07/1991	Pace et al.			
	5,034,871	07/23/91	Okamoto et al.			
	5,066,900	11/19/91	Bassett			
	5,068,575	11/26/91	Dunsmore et al.			

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AB	5,081,411	01/14/92	Walker	2	2	
	5,097,196	03/17/92	Schoneman			
	5,128,603	07/07/92	Wölfel			
	5,134,355	07/28/92	Hastings			
	5,138,249	08/11/92	Capel			
	5,144,547	09/01/92	Masamoto			
	5,170,333	12/08/92	Niwayama			
	5,177,676	01/05/93	Inam et al.			
	5,179,511	01/12/93	Troyk et al.			
	5,184,129	02/02/93	Fung et al			
	5,193,211	03/09/93	Nobusawa			
	5,237,606	08/17/93	Ziermann			
	5,309,078	05/1994	Cameron			
	5,396,412	03/07/95	Barlage			
	5,408,162	04/18/95	Williams			
	5,481,178	01/1996	Wilcox et al			
	5,548,189	08/20/96	Williams			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AB	0 428 377 A2	05/22/91	EPO	2	2		
	60-32565	02/19/85	Japan				
	60-156269	08/16/85	Japan				
	63-307510	12/15/88	Japan				
	3-113986	11/21/91	Japan				
	4-42771	02/13/92	Japan				
	4-49844	02/19/92	Japan				

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<i>AB</i>	4-101286	09/01/92	Japan			
<i>AB</i>	4-128086	11/20/92	Japan			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
<i>AB</i>	Analog Devices, Inc., "High Efficiency Synchronous Step-Down Switching Regulators ADP1148, ADP1148-3.3, ADP1148-5," Datasheet, pp. 1-14, 1997
	Archer, William R., "Current-Driven Synchronous Rectifier," Motorola TMOS Power FET Design Ideas, BR316, pp. 9-10, 1985
	Archer, William R., "Current Drives Synchronous Rectifier," EDN, p. 279, 11/28/85
	Blanchard, Richard, et al., "MOSFETs, Schottky Diodes Vie for Low-Voltage-Supply Designs," EDN, p. 197, 06/28/84
	Borghi et al., "Discontinuous Conduction Mode Power Switching Regulator IC," PCI October 1988 Proceedings, pp. 31-41, 10/88
	Brown, Marty, "Practical Switching Power Supply Design," pp. 20-34, Academic Press, Inc., 1990
	Business Wire, "Micro Linear announces first single-chip power controller for notebook computers," 04/16/92
	Casey, L.F., "Circuit Design For 1-10 MHZ DC-DC Conversion," Massachusetts Institute of Technology ScD. Thesis, Fig. 3-15, pp. 73-80, 1989
	Cassani, John C. et al., "Sophisticated Control IC Enhances 1MHz Current Controlled Regulator Performance," Proceedings of HFPC, May 1992, pp. 167-173.
	Chetty, P.R., "DC timers control dc-dc converters" Electronics, pp. 121 & 123, 11/13/75
	Chryssis, George, "High-frequency switching power supplies," pp. 144-152 and 180-181, McGraw-Hill, 1989
	Dell Computer Corporation, "Dell Computer Corporation Introduces Advanced Notebook PC," (alleged to contain UC1895, see Unitrode Advance Information Datasheet 10/05/92), 09/91
	Dinsmore, D., "Dual regulator handles two input voltages," EDN, 01/21/93
	Fisher, R. A. et al., "Performance of Low Loss Synchronous Rectifiers in a Series-Parallel Resonant DC-DC Converter," Proceedings of the Fourth Annual IEEE Applied Power Electronics Conference and Exposition, pp. 240-246, 03/89
<i>✓</i>	Gauen, Kim, "Synchronous Rectifier Improves Step-Down Converter Efficiency," PCIM, pp. 8, 11-12 & 14-15, 04/93

EXAMINER

A. Berlane

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		December 3, 2003	2838

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
AB	Gontowski et al., "Advanced New Integrated Circuits For Current-Mode Control," Proceedings of the Power Electronics Show and Conference, pp. 341-352, 10/86
	Goodenough, F., "Dozing IC Op Amps Wake Up For Input Signal," Electronic Design, 12/05/91
	Goodenough, Frank, "Synchronous Rectifier UPS PC Battery Life," Electronic Design, pp. 47-53, 04/16/92
	Goodenough, Frank, "Low-Voltage Analog ICs Wait in the Wings," Electronic Design, 09/03/92
	Goodenough, F., "Raise Switcher Efficiency Above 90%", Electronic Design, 01/21/93
	Gottlieb, I. M., "Practical Power-Control Techniques," Howard W. Sams & Co., pp. 116-120, 1987
	Gottlieb, I. M., Electronic Power Control," TAB Books, pp. 107-111, 1991
	Gracie, Paul D., "Intermittent Converter Saves Power," EDN, p. 151, 09/01/89
	Graf, Rudolf F., "Modern Dictionary of Electronics," 6th Edition, pp. 402-03, 1984
	Grant, Duncan A. et al., "POWER MOSFETS, Theory and Application," pp. 239-256, Wiley-Interscience, 1989
	Harris Semiconductor, Hodgins et al., "HIP 5060 Family of Current Mode Control ICs Enhance 1 MHZ Regulator Performance," Application Note AN9212.1, pp. 11-191 to 11-197, 1992
	Harris Semiconductor, "HIP 5060 Power Control IC Single Chip Power Supply", Datasheet, 04/94
	Harris Semiconductor, "HIP 5060 Power Control IC Single Chip Power Supply", Preliminary Datasheet, 01/92
	Harris Semiconductor, "HIP 5060 Power Control IC Single Chip Power Supply", Datasheet, 05/92
	Hewett, S., "Improved Switched Mode Power Supply Regulation by Eliminating Turn-off Spikes," IBM Technical Disclosure Bulletin, Vol. 31, No. 4, pp. 97-98, 09/88
	Hnatek, Eugene R., "Design of Solid State Power Supplies," Third Edition, pp. 65-70, Van Nostrand Reinhold, 1989
	Horowitz & Hill, "The Art of Electronics," pp. 356-359, Cambridge University Press, 1989
	Huffman, B., "Efficiency and Power Characteristics of Switching Regulator Circuits," Application Note 46, Linear Technology, 11/91
	Ikeda, S. et al., "Power MOSFET for Switching Regulator," International Telecommunications Energy Conference, 10/82
	Impala Linear, "ILC6311 Synchronous 3A Switching Regulator With Auto-Light Load Mode ," Preliminary Datasheet, pp.30-38, January 1997
	Impala Linear, "ILC6350 Dual Output Synchronous Step-Down DC-DC Controller," Advanced Information Preliminary Datasheet, pp. 1-6, January 1997
	Impala Linear, "ILC6310 Synchronous Step-down DC-DC Converter With Auto Light-Load Mode Select," Final Datasheet, pp. 21-38, June 1996

EXAMINER

A. Barlane

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EXAMINER INITIALS	
A3	Impala Linear, "ILC6330 13A Adjustable Synchronous DC-DC Controller," Preliminary Datasheet, pp. 39-41, June 1996
	International Rectifier, "IR Application Note AN-978, HV Floating MOS Gate Driver ICs, Full Bridge With Current Mode Control," Application Note from web page, Date Unknown
	International Rectifier, "IR Application Note AN-978, HV Floating MOS-Gate Driver ICs, A Typical Block Diagram," Application Note from web page, Date Unknown
	International Rectifier, Clemente et al., "HV Floating MOS-Gate Driver IC," Application Note AN-978A, 1990
	Intersil, "ISL6223 Mobile Microprocessor CORE Voltage Regulator Multi-Phase Buck PWM Controller," Datasheet, 03/01, File No. 9013
	Kassakian, J. et al., "Principles of Power Electronics," pp. 103-165, Addison-Wesley Publishing Company, 1991
	Kerridge, Brian, "Battery power breeds efficient regulators," EDN, pp. 103-108, 03/18/93
	Lee, Y. S. and Cheng, Y. C., "A 580 kHz switching regulator using on-off control," Journal of the Institution of Electronic and Radio Engineers, Vol. 57, No. 5, pp. 221-226, 09/87
	Lee, et al., "Design of Switching Regulator with Combined FM and On-Off Control," IEEE Transactions on Aerospace and Electronic Systems, Vol. AES-22, No. 6, pp. 725-731, 11/86
	Linear Technology, "LT1074 Switching Regulator," Preliminary Datasheet, 06/89
	Linear Technology, "LT1072 1.25A High Efficiency Switching Regulator," Datasheet, 1990
	Linear Technology, "New Device Cameos," Linear Technology Magazine, 10:18-19 1992
	Linear Technology, "LTC1148/LTC1148-3.3/LTC1148-5 High Efficiency Synchronous Stepdown Switching Regulator," Preliminary Datasheet, 11/92
	Linear Technology, Wilcox, M., "LT1158 Half Bridge N-Channel Power MOSFET Driver," Datasheet, 1992
	Linear Technology, Williams, J., Application Note 29, "Some Thoughts on DC-DC Converters," 1990 Linear Applications Handbook, pp. AN29-1 to AN29-44, 10/88
	Linear Technology, "LT1524/LT3524 Regulating Pulse Width Modulator," 1990
	Linear Technology, "LT1432 5V High Efficiency Step-Down Switching Regulator Controller," 1992 Linear Databook Supplement, pp.4-145 to 4-171.
	Linear Technology, "LT1170/LT1171/LT1172 100kHz 5A, 2.5A, 1.25A High Efficiency Switching Regulators," Data Sheet, 1991
	Linear Technology, "LT1271/LT1269 4A High Efficiency Switching Regulators," Data Sheet, 1992
	Linear Technology, Pietkiewicz et al., "DC-DC Converters for Portable Computers," Design Note 52, 1991
✓	Linear Technology, Nelson, C., App. Note 19, "LT-1070 Design Manual," 06/86

EXAMINER

A. Berlang

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EXAMINER INITIALS	
A3	Linear Technology, "LTC1873 Dual 550 kHz Synchronous 2-Phase Switching Regulator Controller With 5-Bit VID," Datasheet, 1999
	Linear Technology, "LTC1878 High Efficiency Monolithic Synchronous Step-Down Regulator," Initial Release, Final Electrical Specifications, May 2000
	Linear Technology, "LTC1702 Dual 550 kHz Synchronous 2-Phase Switching Regulator Controller," Datasheet, 1999
	Linear Technology, Williams, J., App. Note 25, "Switching Regulators for Poets," 09/87
	Linear Technology, "LT1846/1847, LT3846/3847 Current Mode PWM Controller," Datasheet, 1990
	Linear Technology, "LTC1703 Dual 550 kHz Synchronous 2-Phase Switching Regulator Controller with 5-Bit VID," Datasheet, 1999
	Linear Technology, "LTC1735 High Efficiency Synchronous Step-Down Switching Regulator," Datasheet, 1998
	Linear Technology, "LTC1736 5-Bit Adjustable High Efficiency Synchronous Step-Down Switching Regulator," Datasheet, 1999
	Linear Technology, "LTC1775 High Power NO RSENSE TM Current Mode Synchronous Step-Down Switching Regulator," Datasheet, 1999
	Linear Technology, Williams, J., Application Note 35, "Step Down Switching Regulators," 1990 Linear Applications Handbook, pp. AN35-1 to AN35-32, 8/89
	Linear Technology, "LTC1436A/LTC1436A-PLL/LTC1437A High Efficiency Low Noise Synchronous Step-Down Switching Regulators," Datasheet, 1996
	Linear Technology, "LTC1438/LTC1439 Dual High Efficiency, Low Noise, Synchronous Step-Down Switching Regulators," Datasheet, 1997
	Linear Technology, Nelson, C., "The LT1432:5 Volt Regulator Achieves 90% Efficiency," Linear Technology Magazine, Vol. 2, No. 1, pp. 18-19, 2/92
	Linear Technology, Pietkiewicz, S., "A Low-Voltage, Micro-Power 1 Amp Switching Regulator," presented at the International Solid State Circuits Conference, 1990
	Linear Technology, LT1073 Micropower DC-DC Converter Adjustable and Fixed 5V, 12V," Datasheet, 1991
	Linear Technology, "LTC1538-AUX/LTC1539 Dual High Efficiency, Low Noise, Synchronous, Step-Down Switching Regulators," Datasheet, 1996
	Linear Technology, "LTC1142/LTC1142L/LTC1142HV Dual High Efficiency Synchronous Step-Down Switching Regulators," Datasheet, 1995
	Linear Technology, "LTC1149/LTC1149-3.3/LTC1149-5 High Efficiency Synchronous Step-Down Switching Regulators," Datasheet, 1993

EXAMINER

A. Berlane

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
AB	Linear Technology, "LTC1627 Monolithic Synchronous Step-Down Switching Regulator," Datasheet, 1998
	Linear Technology, "LTC1159/LTC1159-3.3/LTC1159-5 High Efficiency Synchronous Step-Down Switching Regulators," Datasheet, 1994
	Linear Technology, "LTC1435 High Efficiency Low Noise Synchronous Step-Down Switching Regulator," Datasheet, 1996
	Linear Technology, "LTC1267/LTC1267-ADJ/LTC1267-ADJ5 Dual High Efficiency Synchronous Step-Down Switching Regulators," Datasheet, 1995
	Linear Technology, "LTC1266/LTC1266-3.3/LTC1266-5 Synchronous Regulator Controller for NB or P-Channel MOSFETs," Datasheet, 1995
	Markus, John, "Guidebook of Electronic Circuits," pp. 647 & 649, 1971
	Maxim Integrated Products, Inc., "MAX638 Fixed +5V CMOS Step-Down Switching Regulator," Maxim 1989 Integrated Circuits Data Book, pp. 6-57 to 6-64, 1989
	Maxim Integrated Products, Inc., "MAX782/MAX786 Notebook Computer Power Supplies," Advance Information Data Sheet, February 1993, pp.1-8.
	Maxim Integrated Products, "MAX1630-MAX1635 Multi-Output, Low-Noise Power Supply Controllers for Notebook Computers," Datasheet Rev. 3; 04/97
	Maxim Integrated Products, "MAX798 High-Accuracy Step-Down Controller With Synchronous Rectifier for CPU Power," Datasheet, 12/96
	Maxim Integrated Products, "MAX796/MAX797/MAX799 Step-Down Controllers With Synchronous Rectifier for CPU Power," Datasheet Rev. 3a; 11/97
	Maxim Integrated Products, Inc., MAX782, Addendum to Advance Information Sheet and EV Kit Document, bearing Bates numbers L07760 -007785, contains dates in 2/93 and 3/93 (MAX782 Advance Information Data Sheet cited above)
	Maxim Integrated Products, Inc., "MAX635/36/37 Fixed Output CMOS Inverting Switching Regulators," Maxim 1989 Integrated Circuits Data Book, pp. 6-49 to 6-46, 1989
	Maxim Integrated Products, Inc., "MAX639 High-Efficiency, +5V Adjustable Step-Down Switching Regulator," Datasheet, 12/91
	Maxim Integrated Products, Inc., "MAX635/636/637 Preset/Adjustable Output CMOS Inverting Switching Regulators," Datasheet, Date Unknown
	Maxim Integrated Products, "MAX782 Triple-Output Power-Supply Controller for Notebook Computers," Datasheet Rev. 2; 5/94
✓	Maxim Integrated Products, Inc., "MAX783 Triple-Output Power-Supply Controller for Notebook Computers," Datasheet, 05/94

EXAMINER

A. Berland

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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		December 3, 2003	2838

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
A3	Maxim Integrated Products, "MAX887 100% Duty Cycle, Low-Noise, Step-Down PWM DC-DC Converter," Datasheet, 09/96
	Maxim Integrated Products, Inc., "MAX746 High-Efficiency, PWM, Step-Down, N-Channel DC-DC Controller," Datasheet, 11/93
	Maxim Integrated Products, Inc., "MAX747 High-Efficiency PWM, Step-Down P-Channel DC-DC Controller," Datasheet, 09/93
	Maxim Integrated Products, Inc., "MAX777L/MAX778L/MAX779L Low-Voltage Input, 3V/3.3V/5V/ Adjustable Output, Step-Up DC-DC Converters," Datasheet, 07/96
	Maxim Integrated Products, "MAX767 5V-to-3.3V, Synchronous, Step-Down Power-Supply Controller," Datasheet Rev. 2; 08/94
	Meakin, Mike, "The LM3578 Switching Power Regulator," Electronic Engineering, pp. 47-52, 07/86
	Micro Linear Corporation, "ML4861 Low Voltage Boost Regulator," Preliminary Datasheet, July 1992
	Micro Linear Corporation, "ML 4822 DC/DC Converter Controller for Portable Computers," Datasheet, 08/91
	Micro Linear Corporation, "ML4862 EVAL User's Guide," 06/92
	Micro Linear Corporation, "ML4873 Battery Power Control IC," Datasheet, 01/97 (preliminary version 03/93 - cited below)
	Micro Linear Corporation, "ML4862 Battery Power Control IC," Datasheet, 03/97
	Micro Linear Corporation, "ML4862 Battery Power Control IC," Advance Information Datasheet, 07/92
	Micro Linear Corporation, "ML4860 Battery to DC Power Control IC for Portable Systems," Advanced Information, 02/92
	Micro Linear Corporation, "ML4873 Battery Power Control IC," Advance Information Data Sheet, March 15, 1993, pp.1-8.
	Myers, R. and Peck, R., "200-kHz Power FET Technology in New Modular Power Supplies," Hewlett-Packard Journal, 08/81
	NASA Jet Propulsion Laboratory, * "Synchronous Half-Wave Rectifier," 7/89
	National Semiconductor Corporation, "LM1578/LM2578/LM3578 Switching Regulator," Preliminary Datasheet, 1987
	Patel, Raoji, "Using Bipolar Synchronous Rectifiers Improves Power Supply Efficiency," Proceedings of the Power Sources Conference, 11/84
	Patel, R., "Bipolar synchronous rectifiers cut supply losses," EDN, 04/04/85
✓	Quinnell, Richard A., "Analog IC Combines Five Functions for Battery Power Management," EDN, 04/23/92

EXAMINER

A. Berhane

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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		December 3, 2003	2838

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
A3	Redl et al., "Frequency Stabilization and Synchronization of Free-Running Current-Mode Controlled Converters," PESC '86 Record, pp. 519-530, 1986
	Redl, et al., "Overload-Protection Methods For Switching-Mode DC/DC Converters: Classification, Analysis, and Improvements," PESC '87 Record, pp. 107-118, 1987
	Rippel, W.E., "Synchronous Half-Wave Rectifier," NASA Jet Propulsion Laboratory Technical Support Package Vol. 13, No. 7, Item #15, 7/89
	Sakai, E. and Harada, K., "A New Synchronous Rectifier Using Bipolar Transistor Driven by Current Transformer," Fourteenth International Telecommunications Energy Conference, pp. 424-429, 10/92
	Sakai, E. and Harada, K., "Synchronous Rectifier Using a Bipolar Transistor Driven by Current Transformer," Journal of the Society of Electronic Data Communication, Vol. J-74-B-I, No. 8, pp. 639-646, 08/91 (in Japanese, with translation)
	Savant, C.J., Jr., et al., "Electronic Design: Circuits and Systems," pp. 612-613, The Benjamin/Cummings Publishing Co., 1991
	Shepard, J., "Powering portable systems," EDN, 11/05/92
	Siliconix, "Si91XX Synchronous Buck Controller," Objective Specification, 12/20/90
	Siliconix, "Siliconix Si9110/Si9111," Datasheet, 10/87
	Siliconix, "Synchronous Rectification," Design Ideas, 10/80
	Siliconix, "Si9150 Synchronous Buck Regulator Controller, S-42677, Rev. D," Datasheet, 2/14/95
	Siliconix, "High-Efficiency Buck Converter for Notebook Computers," Application Note AN92-4, Date Unknown
	Siliconix, "Designing DC/DC Converters with the Si9110 Switchmode Controller," Siliconix Power Products Data Book, 1991
	Siliconix, "Si9150CY/BCY Synchronous Buck Converter Controller," Preliminary Data Sheet, 10/08/92
	Siliconix, "Si9150 Synchronous Buck Converter Controller," Objective Specification, handwritten pp. 7-17, 9/10/91
	Siliconix, Si9150 documents bearing Bates numbers U040269-71, 9104
	Soclof, Sidney, "Applications of Analog Integrated Circuits," Figure 2.25, pp. 74-75, Prentice-Hall, Inc. 1985
	Sokal et al., "Control Algorithms and Circuit Designs For Optimally Flyback-Charging an Energy-Storage Capacitor," IEEE Fifth Applied Power Electronics Conference, pp. 295-301, 1990
	Steigerwald, R., "High-Frequency Resonant Transistor DC-DC Converters," IEEE Transactions on Industrial Electronics, Volume IE-31, Number 2, pp. 181-191, 05/84
✓	Taylor, "Flyback Converter," Electronic Engineering, p. 23, July, 07/76

EXAMINER

A. Berlane

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
A3	Toyoda, "SB3012P Step Down DC-DC Converter Controller," Datasheet, March 1997
	Toyoda, "SB3030P Step Down DC-DC Converter Controller," Datasheet, December 1996
	Toyoda, "SB3011P Step Down DC-DC Converter Controller," Datasheet, March 1997
	Toyoda, "SB3052P Dual Channel Step Down DC-DC Converter Controller," Datasheet, February 1998
	Toyoda, "SB3020P Dual Channel Step Down DC-DC Converter Controller," Datasheet, March 1997
	Toyoda, "SB3010P Synchronous Stepdown DC-DC Converter Controller," Datasheet August 10, 1995
	Toyoda, "SB3013P Step Down DC-DC Converter Controller," Datasheet, March 1997
	Toyoda, "SB3050P Dual Channel Step Down DC-DC Converter Controller," Datasheet, March 1997
	Toyoda, "SB3031P Step Down DC-DC Converter Controller," Datasheet, December 1996
	Uchida, Takahito, "Control Circuit for Switching Regulator," Japanese Inventor Associated Disclosed Technology Publication No. 92-2362, published 2/15/92 (in Japanese, with translation)
	Unitrode, "Using Bipolar Synchronous Rectifiers Improves Power Supply Efficiency," Application Note U-103, 1989-1990 Unitrode Semiconductor Databook and Application Notes, pp. 12-88 to 12-94, 6/85
	Unitrode, "UC1846/7, UC2846/7, UC3846/7 Current Mode PWM Controller," Datasheet, 1/97
	Unitrode, "UCC29421/2, UCC39421/2 Multimode High Frequency PWM Controller," Preliminary Datasheet, 10/1999
	Unitrode, "UC1874-1,-2, UC2874-1,-2, UC3874-1,-2 High Efficiency, Synchronous Step-Down (Buck) Controllers," Datasheet, 02/1998
	Unitrode, "UC1895, UC2895, UC3895 Synchronous Rectifier Buck PWM Controller," Advance Information Datasheet, 10/06/92
	Unitrode, "UC1870-1/-2, UC2870-1/-2, UC3870-1/-2 High Efficiency, Synchronous, Step-Down (Buck) Controllers," Datasheet, 08/1998
	Unitrode, "UCC3941-3/-5/-ADJ 1V Synchronous Boost Converter," Preliminary Datasheet, 3/97
	Unitrode, "UCC19411/2/3, UCC29411/2/3, UCC39411/2/3 Low Power Synchronous Boost Converter," Preliminary Datasheet, 4/98
	Unitrode, "UCC1582, UCC2582, UCC3582 High Efficiency Synchronous, Step Down Controller," Preliminary Datasheet, 1/97
	Wilcox, M., "The LT1158: Low Voltage, N-Channel Bridge Design Made Easy," Linear Technology Magazine, Vol. 2, No. 1, 2/92
	Williams, J. and Huffman, B., "Proper instrumentation eases low-power dc/dc converter design," EDN, 10/27/88
	Williams, J., "Basic Principles and Ingenious Circuits Yield Stout Switchers," EDN, 01/18/90

EXAMINER

A. Berlane

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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STATEMENT BY APPLICANT

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
<i>AB</i>	Williams, J., "Signal conditioning circuits use *power design techniques," EDN, 08/20/87
	Williams, J., "Employ pulse-width modulators in a wide range of controllers," EDN, 09/02/81
	Williams, J., "Switching regulator takes on more power," Electronic Product Design, 01/86
	Williams, J., "Design dc-dc converters to catch noise at the source," Electronic Design, 10/15/81
	Williams, J., "Conversion techniques adapt voltages to your needs," EDN, 11/10/82
	Williams, J., "Special circuit-design techniques enhance regulator performance," EDN, 09/01/83
	Williams, J., "Use low-power design methods to condition battery outputs," EDN, 10/18/84
	Williams, J., "Chopper amplifier improves operation of diverse circuits," EDN, 03/07/85
	Williams, J., "Refine V/F-converter operation with novel design techniques," EDN, 05/30/85
	Williams, J. and Huffman, B., "Design dc/dc converters for power conservation and efficiency," EDN, 11/10/88
	Williams, J. and Waller, B., "Performance-Enhancement Techniques for Three-Terminal Regulators," New Electronics, 10/04/83
	Williams, J. and Huffman, B., "Switched-capacitor networks simplify dc/dc-converter designs," EDN, 11/24/88
	Williams, J., "Regulator IC speeds design of switching power supplies," EDN, 11/12/87
	Williams, J., "Micropower circuits assist low-current signal conditioning," EDN, 08/06/87
	Williams, J. and Huffman, B., "Precise converter designs enhance system performance," EDN, 10/13/88
	Williams, J. and Dendinger, S., "Simplify feedback controllers with a 2-quadrant PWM IC," EDN, 05/26/83
	Williams, J., "Bridge forms synchronous rectifier," EDN
	Williams, J., "Designing supplies for powering LCD backlighting," EDN, 10/29/92
	Williams, J., "1.5 to 5V converter supplies 200mA," EDN, 10/15/92
	Williams, J., "Design linear circuits that serve digital system needs," EDN, 04/27/89
	Williams, J., "Clever techniques improve thermocouple measurements," EDN, 05/26/88
	Williams, J., "Design techniques extend V/F-converter performance," EDN, 05/16/85
	Williams, J., "Design linear circuits for 5V operation," EDN, 05/02/85
	Williams, J., "Considerations for Five Volt Linear Circuits," Professional Program Session Record 20, Circuits for Analog Signal Processing and Data Conversion is Single +5V Supply Systems, Wescon/85, 11/85
	Williams, J., "Analog circuits operate from a 1.5V cell," EDN, 09/19/85
	Williams, J., "Astute designs improve efficiencies of linear regulators," EDN, 08/17/89
<i>U</i>	Williams, J., "Galvanically isolated switching supplies provide high power," EDN, 11/26/87

EXAMINER

A. Behane

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIALS	
AB	Williams, J., "Correcting power-supply problems," EDN, 10/10/91

EXAMINER

A. Berlance

DATE CONSIDERED

11/05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.